IN THE CLAIMS

This listing of the claims replaces all prior versions of the claims in the application.

1. (Currently Amended.) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

a) ~~an~~ the amino acid sequence of SEQ ID NO:1,

b) a naturally-occurring amino acid sequence having at least 90% sequence identity to the amino acid sequence of SEQ ID NO:1,

c) a biologically-active fragment of the amino acid sequence of SEQ ID NO:1, and

d) an immunogenic fragment of the amino acid sequence of SEQ ID NO:1.

2. (Currently Amended.) An isolated polypeptide of claim 1, having ~~a~~ the sequence of SEQ ID NO:1.

3. (Original.) An isolated polynucleotide encoding a polypeptide of claim 1.

4. (Original.) An isolated polynucleotide encoding a polypeptide of claim 2.

5. (Currently Amended.) An isolated polynucleotide of claim 4, having ~~a~~ the sequence of SEQ ID NO:2.

6. (Original.) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.

7. (Original.) A cell transformed with a recombinant polynucleotide of claim 6.

8. (Original.) A transgenic organism comprising a recombinant polynucleotide of claim 6.

9. (Original.) A method for producing a polypeptide of claim 1, the method comprising:

a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and

b) recovering the polypeptide so expressed.

10. (Original.) An isolated antibody which specifically binds to a polypeptide of claim 1.

11. (Currently Amended.) An isolated polynucleotide comprising a sequence selected from the group consisting of:

a) a polynucleotide comprising ~~a~~ the polynucleotide sequence of SEQ ID NO:2,

b) a naturally occurring polynucleotide comprising a polynucleotide sequence at least 90% identical to ~~a~~ the polynucleotide sequence of SEQ ID NO:2,

c) a polynucleotide having a sequence complementary to a polynucleotide of a),

d) a polynucleotide having a sequence complementary to a polynucleotide of b) and

e) an RNA equivalent of a)-d).

12. (Original.) An isolated polynucleotide comprising at least 60 contiguous nucleotides of a polynucleotide of claim 11.

13. (Original.) A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and

b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

14. (Original.) A method of claim 13, wherein the probe comprises at least 60 contiguous nucleotides.

15. (Original.) A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and

b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

Claims 16-24 (Cancelled.)

25. (Original.) A method of screening for a compound that specifically binds to the polypeptide of claim 1, said method comprising the steps of:

a) combining the polypeptide of claim 1 with at least one test compound under suitable conditions, and

b) detecting binding of the polypeptide of claim 1 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 1.

26. (Original.) A method of screening for a compound that modulates the activity of the polypeptide of claim 1, said method comprising:

a) combining the polypeptide of claim 1 with at least one test compound under conditions permissive for the activity of the polypeptide of claim 1,

b) assessing the activity of the polypeptide of claim 1 in the presence of the test compound, and

c) comparing the activity of the polypeptide of claim 1 in the presence of the test compound with the activity of the polypeptide of claim 1 in the absence of the test compound, wherein a change in the activity of the polypeptide of claim 1 in the presence of the test compound is indicative of a compound that modulates the activity of the polypeptide of claim 1.

27. (Original.) A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a polynucleotide sequence of claim 5, the method comprising:

a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide,

b) detecting altered expression of the target polynucleotide, and

c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.

28. (Original.) A method for assessing toxicity of a test compound, said method comprising:

a) treating a biological sample containing nucleic acids with the test compound;

b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 11 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 11 or fragment thereof;

c) quantifying the amount of hybridization complex; and

d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

29. (Original.) A diagnostic test for a condition or disease associated with the expression of HuLEAP in a biological sample comprising the steps of:

a) combining the biological sample with an antibody of claim 10, under conditions suitable for the antibody to bind the polypeptide and form an antibody:polypeptide complex; and

b) detecting the complex, wherein the presence of the complex correlates with the presence of the polypeptide in the biological sample.

Claims 30-44 (Cancelled.)